

## Aircraft Nodal Data Acquisition System (ANDAS), Phase I

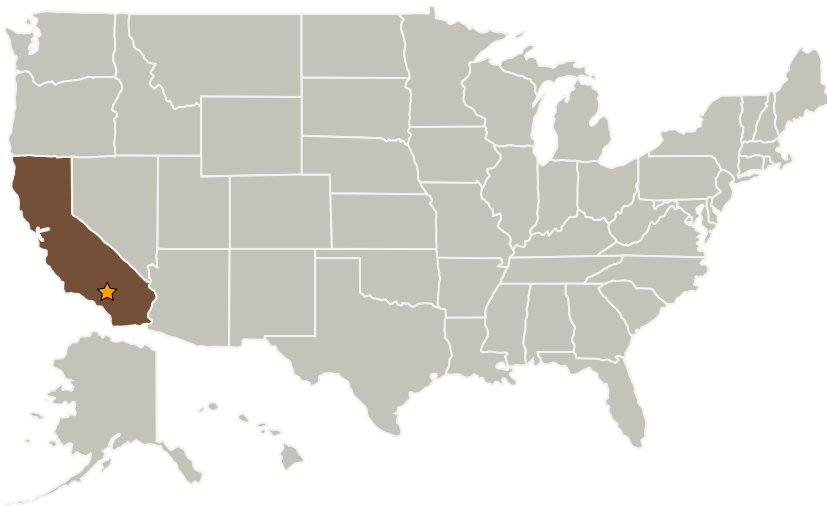
Completed Technology Project (2008 - 2008)



## Project Introduction

Development of an Aircraft Nodal Data Acquisition System (ANDAS) is proposed. The proposed methodology employs the development of a very thin (135 $\mu$ m) hybrid microminiature sensor assembly (MSA) incorporating a micro-electro-mechanical-sensor (MEMS) array, a short-haul radio transceiver, a data mux, memory, power management module, a replaceable battery cartridge, and an antenna. Various MSA packaging concepts will be evaluated using modified MEMS and commercially available ICs (in die form). A final packaging design for batch fabrication in Phase II will be developed. The MSA would be designed as a cement-and-forget-device (except for the battery). A cpmactPCI modular host would manage the MSA nodes as a part of a scatternet/piconet arrangement. The host will be almost entirely made up of COTS hardware and software. Cost estimates for MSA and the host system will be provided.

## Primary U.S. Work Locations and Key Partners



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## Organizational Responsibility

### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

### Lead Center / Facility:

Armstrong Flight Research Center (AFRC)

### Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Armstrong Flight Research Center(AFRC)	Lead Organization	NASA Center	Edwards, California
Waddan Systems	Supporting Organization	Industry Minority-Owned Business	Northridge, California

## Primary U.S. Work Locations

California

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

**Principal Investigator:**

Mahendra Singh

## Technology Areas

**Primary:**

- TX05 Communications, Navigation, and Orbital Debris Tracking and Characterization Systems
  - └ TX05.2 Radio Frequency
    - └ TX05.2.6 Innovative Antennas